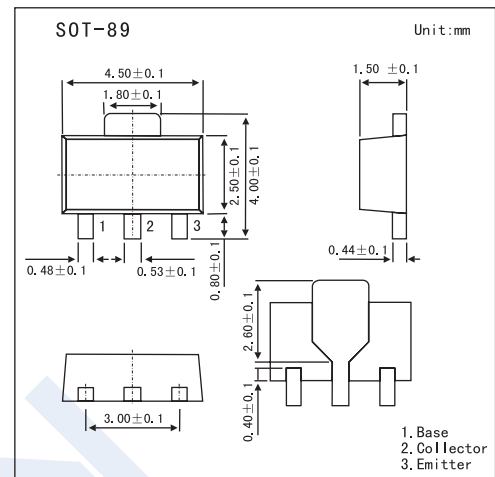


## 27MHz CB Transceiver Driver Applications

## 2SC4272

## ■ Features

- Small Size Making It Easy To Provide High-Density, Small-Sized Hybrid ICs.

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	75	V
Collector-Emitter Voltage	$V_{CEO}$	45	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	1.0	A
Collector Current (Pulse)	$I_{CP}$	1.5	A
Collector Power Dissipation	$P_C^*$	1.3	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$

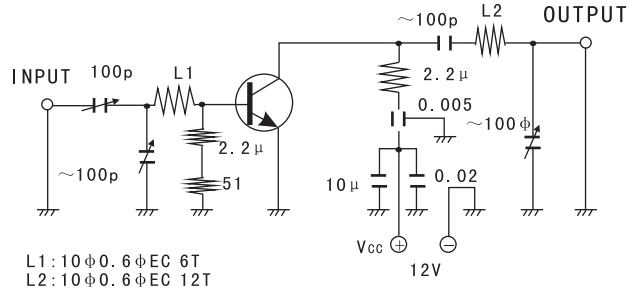
\* Mounted on ceramic board ( $250\text{ mm}^2 \times 0.8\text{ mm}$ )

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 40\text{V}$ , $I_E = 0$			1.0	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 4\text{V}$ , $I_C = 0$			1.0	$\mu\text{A}$
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}$ , $I_E = 0$	75			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}$ , $R_{BE} = \infty$	45			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}$ , $I_C = 0$	5			V
DC Current Gain	$h_{FE}$	$V_{CE} = 5\text{V}$ , $I_C = 500\text{mA}$	60		320	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}$ , $I_B = 50\text{mA}$		0.2	0.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}$ , $I_B = 50\text{mA}$		0.9	1.2	V
Gain-Bandwidth Product	$f_T$	$V_{CE} = 10\text{V}$ , $I_C = 50\text{mA}$	180	250		MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}$ , $f = 1\text{MHz}$		15		pF
Output Power	$P_O$	$V_{CC} = 12\text{V}$ , $f = 27\text{MHz}$ , $P_{in} = 35\text{mW}$	1.0	1.8		W
Collector Efficiency	$\eta_C$	See Test Circuit.	60			%

## 2SC4272

### Test Circuit



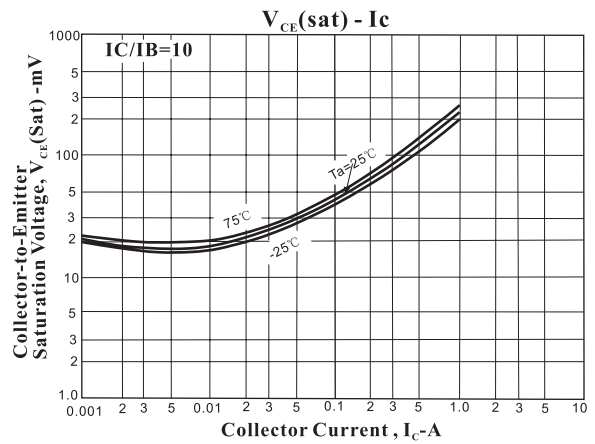
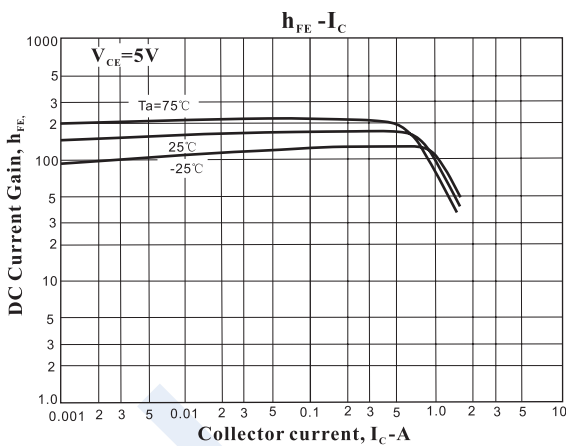
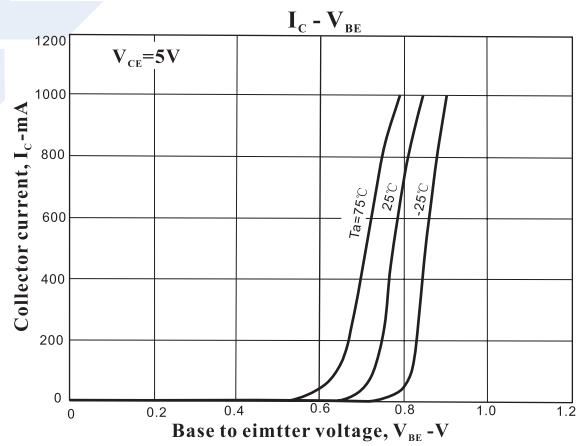
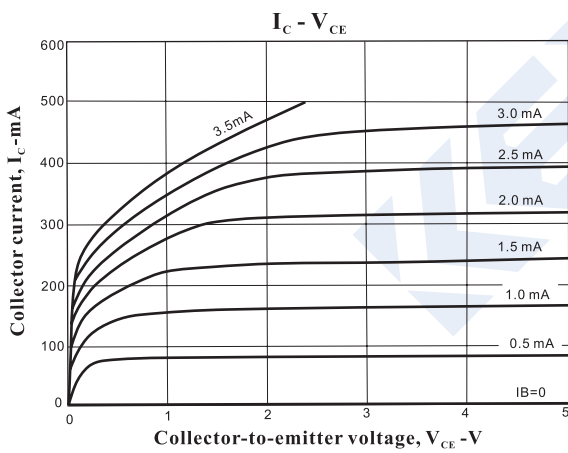
L1: 10φ0.6φEC 6T  
L2: 10φ0.6φEC 12T

Unit (Resistance: Ω, Capacitance: F)

### hFE Classification

Marking	CH		
Rank	D	E	F
hFE	60 ~ 120	100 ~ 200	160 ~ 320

### Electrical Characteristics Curves



2SC4272

